

WEST[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)[Cases](#)**Search Results -**

Terms	Documents
L3 and DLOS	2

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US Pre-Grant Publication Full-Text Database	
JPO Abstracts Database	
EPO Abstracts Database	
Derwent World Patents Index	
IBM Technical Disclosure Bulletins	▼

Search:

L5

[Refine Search](#)[Recall Text](#)[Clear](#)**Search History**DATE: Wednesday, March 20, 2002 [Printable Copy](#) [Create Case](#)**Set Name** **Query**
side by side**Hit Count** **Set Name**
result set

DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR

<u>L5</u>	L3 and DLOS	2	<u>L5</u>
<u>L4</u>	L2 same\$ lipooligosaccharide	3726685	<u>L4</u>
<u>L3</u>	L2 and lipooligosaccharide	45	<u>L3</u>
<u>L2</u>	L1 and catarrhalis	635	<u>L2</u>
<u>L1</u>	Moraxella or Neisseria or branhamela	4036	<u>L1</u>

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 10 of 45 returned.☐ 1. Document ID: US 20020018782 A1

L3: Entry 1 of 45

File: PGPB

Feb 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020018782

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020018782 A1

TITLE: NEISSERIA MENINGITIDIS POLYPEPTIDE, NUCLEIC ACID SEQUENCE AND USES THEREOF

PUBLICATION-DATE: February 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
JACKSON, W. JAMES	MARRIOTSVILLE	MD	US	
HARRIS, ANDREA M.	FREDERICK	MD	US	

US-CL-CURRENT: 424/190.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw Desc	Image
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☐ 2. Document ID: US 20010014672 A1

L3: Entry 2 of 45

File: PGPB

Aug 16, 2001

PGPUB-DOCUMENT-NUMBER: 20010014672

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010014672 A1

TITLE: HIGH MOLECULAR WEIGHT MAJOR OUTER MEMBRANE PROTEIN OF MORAXELLA

PUBLICATION-DATE: August 16, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
SASAKI, KEN	WILLOWDALE		CA	
HARKNESS, ROBIN E.	WILLOWDALE		CA	
LOOSMORE, SHEENA M.	AURORA		CA	
CHONG, PELE	RICHMOND HILL		CA	
KLEIN, MICHEL H.	WILLOWDALE		CA	

US-CL-CURRENT: 514/100; 530/350

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw Desc	Image
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☐ 3. Document ID: US 6355253 B1

L3: Entry 3 of 45

File: USPT

Mar 12, 2002

US-PAT-NO: 6355253

DOCUMENT-IDENTIFIER: US 6355253 B1

TITLE: Preparation and uses of LOS-depleted outer membrane proteins of gram-negative cocci

DATE-ISSUED: March 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zlotnick; Gary W.	Penfield	NY		

US-CL-CURRENT: 424/234.1; 424/250.1, 424/251.1, 424/256.1, 424/279.1, 530/361, 530/412

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw Desc	Image
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☐ 4. Document ID: US 6348198 B1

L3: Entry 4 of 45

File: USPT

Feb 19, 2002

US-PAT-NO: 6348198

DOCUMENT-IDENTIFIER: US 6348198 B1

TITLE: Lactoferrin receptor protein

DATE-ISSUED: February 19, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schryvers; Anthony B.	Calgary			CAX
Bonnah; Robert A.	Calgary			CAX

US-CL-CURRENT: 424/249.1; 424/193.1, 424/203.1, 424/234.1, 424/250.1, 424/251.1, 530/350

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KIMC	Draw Desc	Image
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☐ 5. Document ID: US 6344200 B1

L3: Entry 5 of 45

File: USPT

Feb 5, 2002

US-PAT-NO: 6344200

DOCUMENT-IDENTIFIER: US 6344200 B1

TITLE: Lactoferrin receptor protein

DATE-ISSUED: February 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schryvers; Anthony B.	Calgary			CAX
Bonnah; Robert A.	Calgary			CAX

US-CL-CURRENT: [424/193.1](#); [424/203.1](#), [424/249.1](#), [424/250.1](#), [424/251.1](#), [530/350](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 6. Document ID: US 6335018 B1

L3: Entry 6 of 45

File: USPT

Jan 1, 2002

US-PAT-NO: 6335018

DOCUMENT-IDENTIFIER: US 6335018 B1

TITLE: High molecular weight major outer membrane protein of moraxella

DATE-ISSUED: January 1, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sasaki; Ken	Willowdale			CAX
Harkness; Robin E.	Willowdale			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: [424/251.1](#); [424/184.1](#), [424/190.1](#), [424/235.1](#), [435/471](#), [530/300](#),
[530/350](#), [530/806](#), [530/825](#), [536/23.5](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 7. Document ID: US 6310190 B1

L3: Entry 7 of 45

File: USPT

Oct 30, 2001

US-PAT-NO: 6310190

DOCUMENT-IDENTIFIER: US 6310190 B1

TITLE: USPA1 and USPA2 antigens of Moraxella catarrhalis

DATE-ISSUED: October 30, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Eric J.	Plano	TX		
Aebi; Christoph	Gasel			CHX
Cope; Leslie D.	Mesquite	TX		
Maciver; Isobel	Cottage Grove	WI		
Fiske; Michael J.	Rochester	NY		
Fredenburg; Ross A.	Rochester	NY		

US-CL-CURRENT: [536/23.1](#); [536/23.7](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 8. Document ID: US 6290970 B1

L3: Entry 8 of 45

File: USPT

Sep 18, 2001

US-PAT-NO: 6290970

DOCUMENT-IDENTIFIER: US 6290970 B1

TITLE: Transferrin receptor protein of Moraxella

DATE-ISSUED: September 18, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yang; Yan-Ping	Willowdale			CAX
Myers; Lisa E.	Guelph			CAX
Harkness; Robin E.	Willowdale			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 424/251.1; 424/184.1, 424/190.1, 424/234.1, 424/250.1, 514/2,
530/350, 530/412

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 9. Document ID: US 6287574 B1

L3: Entry 9 of 45

File: USPT

Sep 11, 2001

US-PAT-NO: 6287574

DOCUMENT-IDENTIFIER: US 6287574 B1

TITLE: Proteinase K resistant surface protein of neisseria meningitidis

DATE-ISSUED: September 11, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Brodeur; Bernard R.	Sillery			CAX
Martin; Denis	St-Augustin-de-Des Maures			CAX
Hamel; Josee	Sillery			CAX
Rioux; Clement	Ville-de-Cap-Rouge			CAX

US-CL-CURRENT: 424/250.1; 424/184.1, 424/185.1, 424/190.1, 424/249.1, 530/300,
530/350, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 10. Document ID: US 6264954 B1

L3: Entry 10 of 45

File: USPT

Jul 24, 2001

US-PAT-NO: 6264954

DOCUMENT-IDENTIFIER: US 6264954 B1

TITLE: Haemophilus outer membrane protein

DATE-ISSUED: July 24, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chong; Pele	Richmond Hill			CAX
Thomas; Wayne	Nedlands			AUX
Yang; Yan Ping	Willowdale			CAX
Loosmore; Sheena	Aurora			CAX
Sia; Dw.o slashed. Yuan Charles	Thornhill			CAX
Klein; Michel	Willowdale			CAX

US-CL-CURRENT: 424/190.1; 424/185.1, 424/192.1, 424/193.1, 424/197.11, 424/203.1,
424/234.1, 424/256.1, 435/69.1, 435/69.3, 435/69.7, 530/300, 530/350, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMC	Draw Desc	Image
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L2 and lipooligosaccharide

Documents

45

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L3: Entry 11 of 45

File: USPT

May 15, 2001

US-PAT-NO: 6231864

DOCUMENT-IDENTIFIER: US 6231864 B1

TITLE: Strategically modified hepatitis B core proteins and their derivatives

DATE-ISSUED: May 15, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Birkett; Ashley J.	Solana Beach	CA		

US-CL-CURRENT: 424/189.1; 424/192.1, 424/194.1, 424/196.11, 424/201.1, 424/202.1,
424/227.1, 530/350, 530/402, 530/403

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 12. Document ID: US 6211343 B1

L3: Entry 12 of 45

File: USPT

Apr 3, 2001

US-PAT-NO: 6211343

DOCUMENT-IDENTIFIER: US 6211343 B1

TITLE: Lactoferrin receptor protein

DATE-ISSUED: April 3, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schryvers; Anthony B.	Calgary			CAX
Bonnah; Robert A.	Calgary			CAX

US-CL-CURRENT: 530/412; 424/249.1, 424/250.1, 530/350, 530/413

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 13. Document ID: US 6190668 B1

L3: Entry 13 of 45

File: USPT

Feb 20, 2001

US-PAT-NO: 6190668

DOCUMENT-IDENTIFIER: US 6190668 B1

TITLE: Transferrin receptor protein of moraxella

DATE-ISSUED: February 20, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yang; Yan-Ping	Willowdale			CAX
Myers; Lisa E.	Guelph			CAX
Harkness; Robin E.	Willowdale			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 424/251.1; 435/7.1, 435/7.8, 435/70.2, 530/387.1, 530/412, 530/417

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 14. Document ID: US 6184371 B1

L3: Entry 14 of 45

File: USPT

Feb 6, 2001

US-PAT-NO: 6184371

DOCUMENT-IDENTIFIER: US 6184371 B1

TITLE: Lactoferrin receptor genes of Moraxella

DATE-ISSUED: February 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Du; Run-Pan	Thornhill			CAX
Wang; Quijun	Thornhill			CAX
Yang; Yan-Ping	Willowdale			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 536/23.7; 424/200.1, 424/251.1, 435/252.3, 435/320.1, 435/69.1, 435/69.3, 435/69.7, 536/23.1, 536/24.3, 536/24.32

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 15. Document ID: US 6153580 A

L3: Entry 15 of 45

File: USPT

Nov 28, 2000

US-PAT-NO: 6153580

DOCUMENT-IDENTIFIER: US 6153580 A

TITLE: Analog of haemophilus Hin47 with reduced protease activity

DATE-ISSUED: November 28, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora, Ontario			CAX
Yang; Yan-Ping	Willowdale, Ontario			CAX
Chong; Pele	Richmond Hill, Ontario			CAX
Oomen; Raymond P.	Schomberg, Ontario			CAX
Klein; Michel H.	Willowdale, Ontario			CAX

US-CL-CURRENT: 514/2; 435/220, 514/12

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 16. Document ID: US 6147057 A

L3: Entry 16 of 45

File: USPT

Nov 14, 2000

US-PAT-NO: 6147057

DOCUMENT-IDENTIFIER: US 6147057 A

TITLE: Analog of Haemophilus Hin47 with reduced protease activity

DATE-ISSUED: November 14, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Schomberg			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 514/44; 424/256.1, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 17. Document ID: US 6127153 A

L3: Entry 17 of 45

File: USPT

Oct 3, 2000

US-PAT-NO: 6127153

DOCUMENT-IDENTIFIER: US 6127153 A

TITLE: Method of transferring at least two saccharide units with a polyglycosyltransferase, a polyglycosyltransferase and gene encoding a polyglycosyltransferase

DATE-ISSUED: October 3, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johnson; Karl F.	Willow Grove	PA		
Roth; Stephen	Gladwyne	PA		
Buczala; Stephanie L.	Jenkintown	PA		

US-CL-CURRENT: 435/97; 435/100, 435/101, 435/170, 435/72, 435/84, 435/871

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 18. Document ID: US 6121427 A

L3: Entry 18 of 45

File: USPT

Sep 19, 2000

US-PAT-NO: 6121427

DOCUMENT-IDENTIFIER: US 6121427 A

TITLE: Major outer membrane protein CD of branhamella

DATE-ISSUED: September 19, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yang; Yan-Ping	Willowdale			CAX
Harkness; Robin Edmond	Willowdale			CAX
Myers; Lisa Elizabeth	Guelph			CAX
McGuinness; Ursula	Richmond Hill			CAX
Klein; Michel Henri	Willowdale			CAX

US-CL-CURRENT: 530/412; 424/184.1, 424/251.1, 530/413, 530/414

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 19. Document ID: US 6114125 A

L3: Entry 19 of 45

File: USPT

Sep 5, 2000

US-PAT-NO: 6114125

DOCUMENT-IDENTIFIER: US 6114125 A

TITLE: Analog of Haemophilus Hin47 with reduced protease activity

DATE-ISSUED: September 5, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Schomberg			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 435/7.1; 435/7.32

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 20. Document ID: US 6090576 A

L3: Entry 20 of 45

File: USPT

Jul 18, 2000

US-PAT-NO: 6090576

DOCUMENT-IDENTIFIER: US 6090576 A

TITLE: DNA encoding a transferrin receptor of Moraxella

DATE-ISSUED: July 18, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Myers; Lisa E.	Guelph			CAX
Schryvers; Anthony B.	Calgary			CAX
Harkness; Robin E.	Willowdale			CAX
Loosmore; Sheena M.	Aurora			CAX
Du; Run-Pan	Thornhill			CAX
Yang; Yan-Ping	Willowdale			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 435/69.1; 435/252.3, 435/320.1, 435/325, 435/71.1, 536/23.1,
536/23.7, 536/24.3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMCC	Draw Desc	Image
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L3: Entry 21 of 45

File: USPT

Apr 11, 2000

US-PAT-NO: 6048539

DOCUMENT-IDENTIFIER: US 6048539 A

TITLE: Lactoferrin receptor protein

DATE-ISSUED: April 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schryvers; Anthony B.	Calgary			CAX
Bonnah; Robert A.	Calgary			CAX

US-CL-CURRENT: 424/249.1; 424/250.1, 424/251.1, 530/350

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMC	Draw Desc	Image
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☐ 22. Document ID: US 6025342 A

L3: Entry 22 of 45

File: USPT

Feb 15, 2000

US-PAT-NO: 6025342

DOCUMENT-IDENTIFIER: US 6025342 A

TITLE: Analog of Haemophilus Hin47 with reduced protease activity

DATE-ISSUED: February 15, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Tottenham			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 514/44; 424/93.1, 435/220, 435/252.3, 435/320.1, 435/325, 536/23.2, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMC	Draw Desc	Image
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☐ 23. Document ID: US 6020183 A

L3: Entry 23 of 45

File: USPT

Feb 1, 2000

US-PAT-NO: 6020183

DOCUMENT-IDENTIFIER: US 6020183 A

TITLE: Analog of haemophilus Hin47 with reduced protease activity

DATE-ISSUED: February 1, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Tottenham			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 435/252.3; 424/197.11, 424/256.1, 424/94.63, 435/220, 435/252.1,
435/252.33, 435/69.1, 435/69.3, 435/7.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMIC	Draw Desc	Image
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☐ 24. Document ID: US 6013514 A

L3: Entry 24 of 45

File: USPT

Jan 11, 2000

US-PAT-NO: 6013514

DOCUMENT-IDENTIFIER: US 6013514 A

TITLE: Haemophilus outer membrane protein

DATE-ISSUED: January 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chong; Pele	Richmond Hill			CAX
Thomas; Wayne	Nedlands			AUX
Yang; Yan Ping	Willowdale			CAX
Loosmore; Sheena	Aurora			CAX
Sia; Dwo Yuan Charles	Thornhill			CAX
Klein; Michel	Willowdale			CAX

US-CL-CURRENT: 435/320.1; 424/139.1, 424/150.1, 424/164.1, 424/185.1, 424/190.1,
424/192.1, 424/197.11, 424/256.1, 435/252.3, 435/69.3, 435/91.41, 514/44, 530/350,
536/23.1, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMIC	Draw Desc	Image
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☐ 25. Document ID: US 6004562 A

L3: Entry 25 of 45

File: USPT

Dec 21, 1999

US-PAT-NO: 6004562

DOCUMENT-IDENTIFIER: US 6004562 A

TITLE: Outer membrane protein B1 of Moraxella catarrhalis

DATE-ISSUED: December 21, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Campagnari; Anthony A.	Hamburg	NY		

US-CL-CURRENT: 424/251.1; 424/184.1, 424/234.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 26. Document ID: US 5993826 A

L3: Entry 26 of 45

File: USPT

Nov 30, 1999

US-PAT-NO: 5993826

DOCUMENT-IDENTIFIER: US 5993826 A

TITLE: Methods and compositions relating to useful antigens of moraxella catarrhalis

DATE-ISSUED: November 30, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Eric J.	Plano	TX		
Helminen; Meria E.	Helsinki			FIN
Maciver; Isobel	Dallas	TX		

US-CL-CURRENT: 424/251.1; 424/184.1, 435/69.1, 435/69.3, 530/350, 530/388.1, 530/388.2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 27. Document ID: US 5981503 A

L3: Entry 27 of 45

File: USPT

Nov 9, 1999

US-PAT-NO: 5981503

DOCUMENT-IDENTIFIER: US 5981503 A

TITLE: Analog of Haemophilus Hin47 with reduced protease activity

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Schomberg			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 514/44; 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 28. Document ID: US 5981213 A

L3: Entry 28 of 45

File: USPT

Nov 9, 1999

US-PAT-NO: 5981213

DOCUMENT-IDENTIFIER: US 5981213 A

TITLE: Methods and compositions relating to useful antigens of moraxella catarrhalis

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Eric J.	Plano	TX		
Helminen; Merja E.	Helsinki			FIN
Maciver; Isobel	Dallas	TX		

US-CL-CURRENT: 435/69.1; 424/234.1, 424/251.1, 435/252.2, 435/320.1, 435/69.3,
536/23.1, 536/23.7, 536/24.32

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 29. Document ID: US 5977337 A

L3: Entry 29 of 45

File: USPT

Nov 2, 1999

US-PAT-NO: 5977337

DOCUMENT-IDENTIFIER: US 5977337 A

TITLE: Lactoferrin receptor genes of Moraxella

DATE-ISSUED: November 2, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Du; Run-Pan	Thornhill			CAX
Wang; Quijun	Thornhill			CAX
Yang; Yan-Ping	Willowdale			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 536/23.7; 424/256.1, 435/69.1, 435/69.3, 435/69.4, 530/350, 536/23.1,
536/24.3, 536/24.32

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☐ 30. Document ID: US 5962430 A

L3: Entry 30 of 45

File: USPT

Oct 5, 1999

US-PAT-NO: 5962430

DOCUMENT-IDENTIFIER: US 5962430 A

TITLE: Analog of Haemophilus Hin47 with reduced protease activity

DATE-ISSUED: October 5, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora, Ontario			CAX
Yang; Yan-Ping	Willowdale, Ontario			CAX
Chong; Pele	Richmond Hill, Ontario			CAX
Oomen; Raymond P.	Schomberg, Ontario			CAX
Klein; Michel H.	Willowdale, Ontario			CAX

US-CL-CURRENT: 514/44; 424/256.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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L3: Entry 31 of 45

File: USPT

Aug 17, 1999

US-PAT-NO: 5939297

DOCUMENT-IDENTIFIER: US 5939297 A

TITLE: Analog of haemophilus HIN47 with reduced protease activity

DATE-ISSUED: August 17, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Schomberg			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 435/220, 435/252.3, 435/320.1, 435/325, 435/419, 435/476, 435/69.3,
536/23.2, 536/23.7[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#)[KIMC](#) | [Draw Desc](#) | [Image](#)☐ **32. Document ID: US 5935573 A**

L3: Entry 32 of 45

File: USPT

Aug 10, 1999

US-PAT-NO: 5935573

DOCUMENT-IDENTIFIER: US 5935573 A

TITLE: Method of use of an analog of Haemophilus influenzae Hin47 with reduced protease activity

DATE-ISSUED: August 10, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Schomberg			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 424/94.63; 424/94.64, 435/220, 514/12, 514/2[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#)[KIMC](#) | [Draw Desc](#) | [Image](#)

☐ 33. Document ID: US 5869302 A

L3: Entry 33 of 45

File: USPT

Feb 9, 1999

US-PAT-NO: 5869302

DOCUMENT-IDENTIFIER: US 5869302 A

TITLE: Analog of haemophilus hin47 with reduced protease activity

DATE-ISSUED: February 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Tottenham			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 435/440; 435/220, 435/252.3, 435/320.1, 435/325, 435/419, 435/472,
435/488, 536/23.2, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 34. Document ID: US 5808024 A

L3: Entry 34 of 45

File: USPT

Sep 15, 1998

US-PAT-NO: 5808024

DOCUMENT-IDENTIFIER: US 5808024 A

TITLE: Nucleic acids encoding high molecular weight major outer membrane protein of moraxella

DATE-ISSUED: September 15, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sasaki; Ken	Willowdale, Ontario			CAX
Harkness; Robin E.	Willowdale, Ontario			CAX
Loosmore; Sheena M.	Aurora, Ontario			CAX
Klein; Michel H.	Willowdale, Ontario			CAX

US-CL-CURRENT: 536/23.1; 424/251.1, 435/252.3, 435/320.1, 435/325, 435/69.1,
435/69.7, 530/300, 530/350, 536/23.5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 35. Document ID: US 5759813 A

L3: Entry 35 of 45

File: USPT

Jun 2, 1998

US-PAT-NO: 5759813

DOCUMENT-IDENTIFIER: US 5759813 A

TITLE: Methods and compositions relating to useful antigens of moraxella catarrhalis

DATE-ISSUED: June 2, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Eric J.	Plano	TX		
Maciver; Isobel	Dallas	TX		
Helminen; Merja	Helsinki			FIN

US-CL-CURRENT: 435/69.3; 424/184.1, 435/320.1, 435/325, 435/69.1, 530/350, 536/23.1, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 36. Document ID: US 5725862 A

L3: Entry 36 of 45

File: USPT

Mar 10, 1998

US-PAT-NO: 5725862

DOCUMENT-IDENTIFIER: US 5725862 A

TITLE: Vaccine for branhamelia catarrhalis

DATE-ISSUED: March 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Murphy; Timothy F.	East Amherst	NY		

US-CL-CURRENT: 424/251.1; 424/184.1, 424/185.1, 424/234.1, 435/252.3, 435/254.11, 435/320.1, 435/69.1, 435/70.1, 435/71.1, 514/2, 530/300, 530/350

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 37. Document ID: US 5712118 A

L3: Entry 37 of 45

File: USPT

Jan 27, 1998

US-PAT-NO: 5712118

DOCUMENT-IDENTIFIER: US 5712118 A

TITLE: Vaccine for branhamella catarrhalis

DATE-ISSUED: January 27, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Murphy; Timothy F.	East Amherst	NY		

US-CL-CURRENT: 435/69.3; 435/235.1, 435/252.1, 435/320.1, 435/91.1, 435/91.4, 530/350, 536/22.1, 536/23.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 38. Document ID: US 5665353 A

L3: Entry 38 of 45

File: USPT

Sep 9, 1997

US-PAT-NO: 5665353

DOCUMENT-IDENTIFIER: US 5665353 A

TITLE: Composition containing an analog of haemophilus Hin47 with reduced protease activity

DATE-ISSUED: September 9, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Schomberg			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 424/94.63; 424/94.64, 435/220, 514/12, 514/2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 39. Document ID: US 5656436 A

L3: Entry 39 of 45

File: USPT

Aug 12, 1997

US-PAT-NO: 5656436

DOCUMENT-IDENTIFIER: US 5656436 A

TITLE: Analog of Haemophilus Hin47 with reduced protease activity

DATE-ISSUED: August 12, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Schomberg			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 435/7.1; 424/256.1, 435/252.3, 435/6, 435/7.32, 530/350, 536/23.1, 536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 40. Document ID: US 5599693 A

L3: Entry 40 of 45

File: USPT

Feb 4, 1997

US-PAT-NO: 5599693

DOCUMENT-IDENTIFIER: US 5599693 A

TITLE: Methods and compositions relating to useful antigens of moraxella catarrhalis

DATE-ISSUED: February 4, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Eric J.	Plano	TX		
Helminen; Merja	Dallas	TX		
Maciver; Isobel	Dallas	TX		

US-CL-CURRENT: 435/69.3; 424/184.1, 424/251.1, 435/243, 435/252.1, 435/7.2,
435/7.32, 435/71.1, 435/71.2, 436/543, 530/388.2, 530/388.4, 530/412, 530/413

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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L3: Entry 41 of 45

File: USPT

Sep 3, 1996

US-PAT-NO: 5552146

DOCUMENT-IDENTIFIER: US 5552146 A

TITLE: Methods and compositions relating to useful antigens of Moraxella catarrhalis

DATE-ISSUED: September 3, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Eric J.	Plano	TX		
Helminen; Merja	Dallas	TX		
Maciver; Isobel	Dallas	TX		

US-CL-CURRENT: 424/251.1; 424/184.1, 530/350[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[RPMC](#) [Draw Desc](#) [Image](#)☐ 42. Document ID: US 5506139 A

L3: Entry 42 of 45

File: USPT

Apr 9, 1996

US-PAT-NO: 5506139

DOCUMENT-IDENTIFIER: US 5506139 A

TITLE: Analog of haemophilus Hin47 with reduced protease activity

DATE-ISSUED: April 9, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Loosmore; Sheena M.	Aurora			CAX
Yang; Yan-Ping	Willowdale			CAX
Chong; Pele	Richmond Hill			CAX
Oomen; Raymond P.	Tottenham			CAX
Klein; Michel H.	Willowdale			CAX

US-CL-CURRENT: 435/252.3; 435/220, 435/320.1, 435/476, 536/23.2, 536/23.7[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[RPMC](#) [Draw Desc](#) [Image](#)☐ 43. Document ID: WO 9936086 A1

L3: Entry 43 of 45

File: EPAB

Jul 22, 1999

PUB-NO: WO009936086A1

DOCUMENT-IDENTIFIER: WO 9936086 A1

TITLE: LIPOOLIGOSACCHARIDE-BASED VACCINE FOR PREVENTION OF MORAXELLA (BRANHAMELLA) CATARRHALIS INFECTIONS IN MAMMALS

PUBN-DATE: July 22, 1999

INVENTOR-INFORMATION:

NAME

COUNTRY

GU, XIN-XING

US

ROBBINS, JOHN B

US

INT-CL (IPC): A61 K 39/02; A61 K 39/385; C08 B 37/00

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 44. Document ID: WO 9936086 A1, AU 9922212 A, BR 9906902 A, EP 1047447 A1, CN 1288384 A, KR 2001034124 A, MX 2000006678 A1

L3: Entry 44 of 45

File: DWPI

Jul 22, 1999

DERWENT-ACC-NO: 1999-444322

DERWENT-WEEK: 199937

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TITLE: Detoxified lipooligosaccharide-based vaccine for prevention of Moraxella catarrhalis infections in mammals

INVENTOR: GU, X; ROBBINS, J B

PRIORITY-DATA: 1998US-071483P (January 13, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9936086 A1	July 22, 1999	E	060	A61K039/02
AU 9922212 A	August 2, 1999		000	A61K039/02
BR 9906902 A	October 17, 2000		000	A61K039/02
EP 1047447 A1	November 2, 2000	E	000	A61K039/02
CN 1288384 A	March 21, 2001		000	A61K039/02
KR 2001034124 A	April 25, 2001		000	A61K039/02
MX 2000006678 A1	February 1, 2001		000	A61K039/02

INT-CL (IPC): A61 K 39/02; A61 K 39/385; C08 B 37/00

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 45. Document ID: WO 9853851 A1, AU 9877010 A

L3: Entry 45 of 45

File: DWPI

Dec 3, 1998

DERWENT-ACC-NO: 1999-070180

DERWENT-WEEK: 199906

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TITLE: New laft mutants of gram-negative pathogenic bacteria - produce LOS having reduced toxicity, but retaining antigenicity, useful for immunisation against gram negative bacteria

INVENTOR: APICELLA, M A; GIBSON, B W ; NICHOLS, W A

PRIORITY-DATA: 1997US-047791P (May 28, 1997)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9853851 A1	December 3, 1998	E	017	A61K039/02
AU 9877010 A	December 30, 1998		000	A61K039/02

INT-CL (IPC): A01 N 63/00; A61 K 39/02; C12 N 1/00; C12 N 1/20

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	RUMC	Draw Desc	Image
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L2 and lipooligosaccharide

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L5: Entry 1 of 2

File: USPT

May 15, 2001

DOCUMENT-IDENTIFIER: US 6231864 B1

TITLE: Strategically modified hepatitis B core proteins and their derivatives

Detailed Description Paragraph Right (74):

Moraxella (Branhamella) catarrhalis is a know cause of otitis media and sinusitis in children and lower respiratory tract infections in adults. The lipid A portion of the lipooligosaccharide surface antigen (LOS) of the bacterium is cleaved at the 3-deoxy-D-manno-octulosonic acid-glucosamine linkage. The cleavage product is treated with mild-alkali to remove ester-linked fatty acids while preserving amide-linked fatty acids to yield detoxified lipopolysaccharide (dLOS) from M. catarrhalis. The dLOS is not immunogenic until it is attached to a protein carrier. Xin-Xing Gu, et al. Infection and Immunity 66(5):1891-1897 (1998).

Detailed Description Paragraph Table (2):

TABLE 2 Polypeptide haptens T or B cell SEQ Organism Antigen epitope Sequence ID NO
Streptococcus PspA B KLEELSDKIDELDAE 25 pneumoniae Streptococcus PspA B
SQKKYDEDQKKTEEKA ALEKA 26 pneumoniae ASEEMDKAVAAVQQA Cryptosporidium P23 B
QDKPADAPAAEAPAAEPAAQ 27 parvum DKPADA HIV P24 T GPKEPFRDYVDRFYKC 28 HIV GP120 B
RKRIHIGPGRIFYITKN 29 Foot and Mouth VP1 B YNGECRYNRNAVPLRGDLQV 30 Disease Virus
LAQKVARTLP Corynebacterium toxin T FQVVHNSYNRPAYSPGC 31 diphtheriae Borrelia OspA T
VEIKEGTVTLKREIDKNGKVT 32 burgdorferi VSLC Borrelia OspA T TLSKNISKSGEVSVELNDC 33
burgdorferi Influenza A8/PR8 HA T SSVSSFERFEC 34 Influenza A8/PR8 HA B YRNLLWLTEK 35
Yersinia pestis V Ag B DILKVIVDSMNHG DARSCLR 36 EELAELTAELKIYSVIAEIN
KHLSSSGTINIHDKSINLMDK NLYGYTDEEIFKASAEYKILE KMPQTTIQVDGSEKKIVSIKD
FLGSENKRTGALGNLKNSSYSY NKDNNELSHFATTCS D Haemophilus pBOMP B CSSSNDAAGNGAAQFGGY 37
influenzae Haemophilus pBOMP B NKLGTVSYGEE 38 influenzae Haemophilus pBOMP B
NDEAAYSKNRRAYLAY 39 influenzae Moraxella copB B LDIEKDKKKRTDEQLQAE LDD 40 catarrhalis
KYAGKG Y Moraxella copB B LDIEKNKKKRTAE LQAE LDD 41 catarrhalis KYAGKG Y Moraxella copB
B IDIEKKGKIRTEAE LLAELNK 42 catarrhalis DYPGQGY Porphyromonas HA B
GVSPKVC KDVTVEGSNEFAPV 43 gingivalis QNLT Porphyromonas HA B RIQSTWRQKTVDLPAGTKYV 44
gingivalis Trypanosoma T SHNFTLVASVIEEAPSGNTC 45 cruzi Trypanosoma B
KAAIAPAKAAAAPAKAATAPA 46 cruzi Plasmodium MSP1 T SVQIPKVPYPNGIVYC 47 falciparum
Plasmodium MSP1 T DFNHYITLKTGLEADC 48 falciparum Streptococcus AgI/II B & T
KPRPIYEAKLAQNQKC 49 sobrinus Streptococcus AgI/II B & T AKADYEAKLAQYEKDL C 50
sobrinus lymphocytic NP T RPQASGVYMGNLTAQC 51 Choriomeningitis virus Shigella
Invasin B KDRTLIEQK 52 flexneri respiratory G B CSICSNNPTCWAICK 53 syncytial virus
Plasmodium vivax CS B GDRADGQPAGDRADGQPAG 54 Clostridium tox T QYIKANSKFIGITELC 55
tetani Entamoeba lectin B VECAS TVCQNDNSCPIIADVE 56 histolytica KCNQ Schistosoma para
B DLQSEISLSLENGELIRRAKS 57 japonicum AESLASELQRRVD Schistosoma para B
DLQSEISLSLENGELIRRAKA 58 mansoni AESLASDLQRRVD Plasmodium vivax B DRAAGQPAGDRADGQPAG
83 Influenza virus Infl B CNNPHRIL 84 Influenza virus Infl T CPKYVKQNTLKLATGMRNVPE
85 KQTR Influenza virus Infl B SIMRSDAPIGTCSSECITPNG 14 SIPNDKPFQNVNKITY Influenza
virus Infl B RGIFGAIAGFIENGWEGMID 15 WYGFHRQN Influenza virus Infl B EKQTRGIFGA 16
Mycobacterium T AVLEDPYILLVSSKV 86 tuberculosis Mycobacterium T LLVSSKVSTVKDLLP 87
tuberculosis Mycobacterium T LLPLLEKVIGAGKPL 88 tuberculosis Mycobacterium T
AILTGGQVISEEVGL 89 tuberculosis Mycobacterium T IAFNSGLEPGVVAEK 90 tuberculosis
Mycobacterium T ARRGLERGLNALADAVKV 91 tuberculosis Mycobacterium T EKIGAE LVKEVAKK 92
tuberculosis Mycobacterium T GLKRGIEKAVEKVETEL 93 tuberculosis Mycobacterium T
IEDAVRNAKAAVEEG 94 tuberculosis Feline leukemia FeLV B CDIIGNTWNP SDQEPFPGYG 95 virus
Feline leukemia FeLV B CIGTVPKTHQALCNETQQGHT 96 virus Feline leukemia FeLV B
GNYSNQTNP PPSC 97 virus Feline leukemia FeLV B TDIQALEESISALEKSLTSL S 98 virus E
Feline leukemia FeLV AKLRERLKRQQLF 99 virus Feline leukemia FeLV

DSQQGWFEFENKSPWFETTLI 100 virus SS Feline leukemia FeLV QVMTITPPQAMGNLVLP 101 virus
Feline leukemia FeLV DQKPPSRQSQIESRVTP 102 virus Feline leukemia FeLV
RRGLDILFLQEGGLC 103 virus Feline leukemia FeLV QEGGLCAALEECQIGGLCAAL 104 virus KEEC
Plasmodium B NANPNANPNANP 105 falciparum Circumsporozoite QAQGDGANAGQP 113